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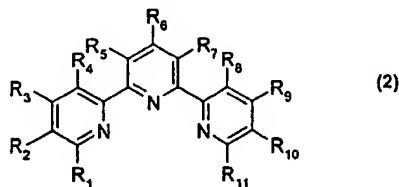
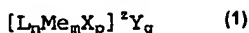
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(54) Title: USE OF METAL COMPLEX COMPOUNDS AS OXIDATION CATALYSTS



(57) Abstract: An automatic dishwasher detergent formulation comprising: - (a) a metal complex compounds of formula (1)  $[L_n Me_m X_p]^+ Y_q$  wherein Me is manganese, titanium, iron, cobalt, nickel or copper, X is a co-ordinating or bridging radical, n and m are each independently of the other an integer having a value of from 1 to 8, p is an integer having a value of from 0 to 32, z is the charge of the metal complex, Y is a counter-ion,  $q = z / (\text{charge } Y)$ , and L is a ligand of formula (2); wherein  $R_1, R_2, R_3, R_4, R_5, R_6, R_7, R_8, R_9, R_{10}$  and  $R_{11}$  are each independently of the others hydrogen; unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl; cyano; halogen; nitro;  $-COOR_{12}$  or  $-SO_3R_{12}$  wherein  $R_{12}$  is in each case hydrogen, a cation or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl;  $SR_{13}$ ,  $-SO_2R_{13}$  or  $-OR_{13}$  wherein  $R_{13}$  is in each case hydrogen or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl;  $-N(R_{13})$   $-NR'_{13}R''_{13}$  wherein  $R_{13}$ ,  $R'_{13}$  and  $R''_{13}$  are as defined above for  $R_{13}$ ;  $-NR_{14}NR_{15}$  or  $-N^+R_{14}R_{15}R_{16}$  wherein  $R_{14}$ ,  $R_{15}$  and  $R_{16}$  are each independently of the other(s) hydrogen or unsubstituted or substituted  $C_1$ - $C_{18}$ alkyl or aryl, or  $R_{14}$  and  $R_{15}$  together with the nitrogen atom bonding them from an unsubstituted or substituted 5-, 6- or 7-membered ring which may optionally contain further hetero atoms; with the proviso that  $R_1, R_2, R_3, R_4, R_5, R_6, R_7, R_8, R_9, R_{10}$  and  $R_{11}$  are not simultaneously hydrogen, as a catalyst for oxidation reactions; and (b) an enzyme.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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WPI Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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